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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/771,465	02/05/2004	Hiroki Kanai	501.43494X00	2954

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EXAMINER

BRADLEY, MATTHEW A

ART UNIT

PAPER NUMBER

2187

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/771,465	KANAI, HIROKI	
	<b>Examiner</b>	<b>Art Unit</b>	
	Matthew Bradley	2187	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on 5 February 2004 was filed on the mailing date of 5 February 2004 for application 10/771,465. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

The information disclosure statement (IDS) submitted on 10 November 2004 was filed after the mailing date of 5 February 2004 for application 10/771,465. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

The information disclosure statement (IDS) submitted on 4 May 2005 was filed after the mailing date of 5 February 2004 for application 10/771,465. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Specification***

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-14 are rejected under 35 U.S.C. 102(a) and 35 U.S.C. 102(e) as being anticipated by Matsunami et al (U.S. 2003/0023784).

As per independent claim 1, Matsunami et al teach,

- a channel controller for receiving a data input/output request based on file-name indication from an (Figure 1 item 5)
- information processing device (Figure 1 item 100)
- through a network and transmitting/receiving data to/from the information processing device; (Figure 1 item 8)
- a disk controller for carrying out input/output control of data stored in a storage volume for storing the data; (Figure 1 item 20)
- and a first memory for storing the data delivered between the channel controller and the disk controller, (Paragraph 42)
- wherein the channel controller is equipped with a first processor for outputting a block-basis I/O request corresponding to the data

input/output request and controlling the first memory, (Paragraph 35). *The Examiner notes that the clients shown as item 100 in Figure 1 are connected "through a block I/O interface." Accordingly any data requests sent and subsequently received would be received as a block-basis response.*

- a file access processor which has a second processor and a second memory controlled by the second processor and serves to control the transmission/reception of the data input/output request and the data which is carried out with the information processing device, a data transfer device for controlling data transfer between the first memory and the second memory, and a third memory controlled by the first processor, (Paragraph 45)
- which are formed on a circuit board, and, *The Examiner notes that as file servers are being taught by Matsunami et al, it is inherent that the individual server components are built on a circuit board to meet the requirements as specified in Paragraph 45.*
- wherein the second processor transmits information indicating the storage position of the data in the second memory to the first processor, (Paragraph 45) *The Examiner notes that the file server contains a data transfer controller which transfers data between the file server and the requesting client. In order for the data transfer controller to begin the transfer of data, an address of where the*

*data that is being requested is passed from the file server to the requesting machine to request based on location.*

- the first processor writes into the third memory data transfer information containing information indicating the storage position of the data in the first memory and information indicating the storage position of the data in the second memory, (Paragraph 56)
- and the data transfer device reads out the data transfer information from the third memory and controls the data transfer between the first memory and the second memory on the basis of the data transfer information thus read out. (Paragraph 46).

As per independent claim 2, Matsunami et al teach,

- a channel controller for receiving a data input/output request based on file-name indication from an (Figure 1 item 5)
- information processing device (Figure 1 item 100)
- through a network and transmitting/receiving data to/from the information processing device; (Figure 1 item 8)
- a disk controller for carrying out input/output control of data stored in a storage volume for storing the data; (Figure 1 item 20)
- and a first memory for storing the data delivered between the channel controller and the disk controller, (Paragraph 42)
- wherein the channel controller is equipped with a first processor for outputting a block-basis I/O request corresponding to the data input/output request and controlling the first memory, (Paragraph

35). *The Examiner notes that the clients shown as item 100 in Figure 1 are connected "through a block I/O interface." Accordingly any data requests sent and subsequently received would be received as a block-basis response.*

- a file access processor which has a second processor and a second memory controlled by the second processor and serves to control the transmission/reception of the data input/output request and the data which is carried out with the information processing device, a data transfer device for controlling data transfer between the first memory and the second memory, and a third memory controlled by the first processor, (Paragraph 45)
- which are formed on a circuit board, and, *The Examiner notes that as file servers are being taught by Matsunami et al, it is inherent that the individual server components are built on a circuit board to meet the requirements as specified in Paragraph 45.*
- wherein the second processor transmits information indicating the storage position of the data in the second memory to the first processor, (Paragraph 45) *The Examiner notes that the file server contains a data transfer controller which transfers data between the file server and the requesting client. In order for the data transfer controller to begin the transfer of data, an address of where the data that is being requested is passed from the file server to the requesting machine to request based on location.*

- the first processor writes into the third memory data transfer information containing information indicating the storage position of the data in the first memory and information indicating the storage position of the data in the second memory and transmits the storage position of the data transfer information in the third memory to the data transfer device, (Paragraph 56)
- and the data transfer device reads out the data transfer information from the third memory and controls the data transfer between the first memory and the second memory on the basis of the data transfer information thus read out. (Paragraph 46).

As per independent claim 3, Matsunami et al teach,

- a channel controller for receiving a data input/output request based on file-name indication from an (Figure 1 item 5)
- information processing device (Figure 1 item 100)
- through a network and transmitting/receiving data to/from the information processing device; (Figure 1 item 8)
- a disk controller for carrying out input/output control of data stored in a storage volume for storing the data; (Figure 1 item 20)
- and a first memory for storing the data delivered between the channel controller and the disk controller, (Paragraph 42)
- wherein the channel controller is equipped with a first processor for outputting a block-basis I/O request corresponding to the data input/output request and controlling the first memory, (Paragraph



35). *The Examiner notes that the clients shown as item 100 in Figure 1 are connected "through a block I/O interface." Accordingly any data requests sent and subsequently received would be received as a block-basis response.*

- a file access processor which has a second processor and a second memory controlled by the second processor and serves to control the transmission/reception of the data input/output request and the data which is carried out with the information processing device, a data transfer device for controlling data transfer between the first memory and the second memory, and a third memory controlled by the first processor, (Paragraph 45)
- which are formed on a circuit board, and *The Examiner notes that as file servers are being taught by Matsunami et al, it is inherent that the individual server components are built on a circuit board to meet the requirements as specified in Paragraph 45.*
- wherein the first processor writes into the third memory first data transfer information containing information indicating the storage position of the data in the first memory, (Paragraph 45) *The Examiner notes that the file server contains a data transfer controller which transfers data between the file server and the requesting client. In order for the data transfer controller to begin the transfer of data, an address of where the data that is being*

*requested is passed from the file server to the requesting machine to request based on location.*

- the second processor writes into the second memory second data transfer information containing information indicating the storage position of the data in the second memory, (Paragraph 45) *The Examiner notes that the file server contains a data transfer controller which transfers data between the file server and the requesting client. In order for the data transfer controller to begin the transfer of data, an address of where the data that is being requested is passed from the file server to the requesting machine to request based on location.*
- and the data transfer device reads out the second data transfer information from the second memory, reads out the first data transfer information from the third memory, and controls the data transfer between the first memory and the second memory on the basis of the first data transfer information and the second data transfer information. (Paragraph 46).

As per independent claim 4, Matsunami et al teach,

- a channel controller for receiving a data input/output request based on file-name indication from an (Figure 1 item 5)
- information processing device (Figure 1 item 100)
- through a network and transmitting/receiving data to/from the information processing device; (Figure 1 item 8)

- a disk controller for carrying out input/output control of data stored in a storage volume for storing the data; (Figure 1 item 20)
- and a first memory for storing the data delivered between the channel controller and the disk controller, (Paragraph 42)
- wherein the channel controller is equipped with a first processor for outputting a block-basis I/O request corresponding to the data input/output request and controlling the first memory, (Paragraph 35). *The Examiner notes that the clients shown as item 100 in Figure 1 are connected "through a block I/O interface." Accordingly any data requests sent and subsequently received would be received as a block-basis response.*
- a file access processor which has a second processor and a second memory controlled by the second processor and serves to control the transmission/reception of the data input/output request and the data which is carried out with the information processing device, a data transfer device for controlling data transfer between the first memory and the second memory, and a third memory controlled by the first processor, (Paragraph 45)
- which are formed on a circuit board, *The Examiner notes that as file servers are being taught by Matsunami et al, it is inherent that the individual server components are built on a circuit board to meet the requirements as specified in Paragraph 45.*

- and wherein the first processor writes into the third memory first data transfer information containing information indicating the storage position of the data in the first memory, the second processor writes into the second memory second data transfer information containing information indicating the storage position of the data in the second memory,  
(Paragraph 45) *The Examiner notes that the file server contains a data transfer controller which transfers data between the file server and the requesting client. In order for the data transfer controller to begin the transfer of data, an address of where the data that is being requested is passed from the file server to the requesting machine to request based on location.*
- the second processor transmits information indicating the storage position of the second data transfer information to the first processor, the first processor transmits to the data transfer device transfer start information containing information indicating the storage position of the first data transfer information and information indicating the storage position of the second data transfer information, (Paragraph 45) *The Examiner notes that the file server contains a data transfer controller which transfers data between the file server and the requesting client. In order for the data transfer controller to begin the transfer of data, an address of where the data that is being requested is passed from the file server to the requesting machine to request based on location.*

- and the data transfer device reads out the second data transfer information from the second memory on the basis of the transfer start information, reads out the first data transfer from the third memory on the basis of the transfer start information, and controls the data transfer between the first memory and the second memory on the basis of the first data transfer information and the second data transfer information.  
(Paragraph 46).

As per dependent claim 5, Matsunami et al teach, wherein the data transfer device writes into the third memory information indicating the result of the data transfer carried out between the first memory and the second memory.

As per independent claim 6, Matsunami et al teach,

- a channel controller for receiving a data writing request based on a file-name indication and writing data from an (Figure 1 item 5)
- information processing device (Figure 1 item 100)
- through a network; (Figure 1 item 8)
- a disk controller for writing the writing data into a storage volume in which data are stored; (Figure 1 item 20)
- and a first memory for storing the writing data transmitted/received between the channel controller and the disk controller, (Paragraph 42)
- wherein the channel controller contains a first processor for outputting a block-basis write request corresponding to the data writing request and controlling the first memory, (Paragraph 35). *The Examiner notes that the clients shown as item 100 in Figure 1 are connected "through a block I/O*

*interface.” Accordingly any data requests sent and subsequently received would be received as a block-basis response.*

- a file access processor which has a second processor and a second memory controlled by the second processor and serves to receive the data writing request and the writing data from the information processing device, a data transfer device for controlling the data transfer between the first memory and the second memory, and a third memory controlled by the first processor, (Paragraph 45)
- which are formed on a circuit board, and *The Examiner notes that as file servers are being taught by Matsunami et al, it is inherent that the individual server components are built on a circuit board to meet the requirements as specified in Paragraph 45.*
- wherein the first processor writes into the third memory first data transfer information containing information indicating the storage position of the writing data in the first memory, the second processor writes into the second memory second data transfer information containing information indicating the storage position of the writing data in the second memory and transmits information indicating the storage position of the second data transfer information to the first processor, (Paragraph 45) *The Examiner notes that the file server contains a data transfer controller which transfers data between the file server and the requesting client. In order for the data transfer controller to begin the transfer of data, an*

*address of where the data that is being requested is passed from the file server to the requesting machine to request based on location.*

- the first processor transmits the data transfer device transfer start information containing information indicating the storage position of the first data transfer information and information indicating the storage position of the second data transfer information, the data transfer device reads out the second data transfer information from the second memory on the basis of the transfer start information, reads out the first data transfer information from the third memory on the basis of the transfer start information and transfers the writing data from the second memory to the first memory on the basis of the first data transfer information and the second data transfer information, (Paragraph 45) *The Examiner notes that the file server contains a data transfer controller which transfers data between the file server and the requesting client. In order for the data transfer controller to begin the transfer of data, an address of where the data that is being requested is passed from the file server to the requesting machine to request based on location.*
- and the disk controller writes into the storage volume the writing data stored in the first memory on the basis of the write request. (Paragraph 46).

As per independent claim 7, Matsunami et al teach,

- a channel controller for receiving a data read- out request based on a file-name indication from an (Figure 1 item 5)

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- information processing device (Figure 1 item 100)
- through a network and transmitting to the information processing device read-out data read out from a storage volume for storing data; (Figure 1 item 8)
- a disk controller for reading out the read-out data from the storage volume; (Figure 1 item 20)
- and a first memory for storing the read-out data transmitted/ received for the storage volume between the channel controller and the disk controller, (Paragraph 42)
- wherein the channel controller comprises a first processor for outputting a block-basis read request corresponding to the data read-out request and controlling the first memory, (Paragraph 35). *The Examiner notes that the clients shown as item 100 in Figure 1 are connected "through a block I/O interface." Accordingly any data requests sent and subsequently received would be received as a block-basis response.*
- a file access processor which has a second processor and a second memory for controlling the second processor and receives the data read-out request from the information processing device, a data transfer device for controlling the data transfer between the first memory and the second memory, and a third memory controlled by the first memory, (Paragraph 45)



- which are formed on a circuit board, *The Examiner notes that as file servers are being taught by Matsunami et al, it is inherent that the individual server components are built on a circuit board to meet the requirements as specified in Paragraph 45.*
- and wherein the disk controller writes into the first memory the read-out data read out from the storage volume on the basis of the read request, the first processor writes into the third memory first data transfer information containing information indicating the storage position of the read-out data in the first memory, the second processor writes into the second memory second data transfer information containing information indicating the storage position of the read-out data in the second memory and transmits information indicating the storage position of the second data transfer information to the first processor, (Paragraph 45) *The Examiner notes that the file server contains a data transfer controller which transfers data between the file server and the requesting client. In order for the data transfer controller to begin the transfer of data, an address of where the data that is being requested is passed from the file server to the requesting machine to request based on location.*
- the first processor transmits to the data transfer device transfer start information containing information indicating the storage position of the first data transfer information and information indicating the storage position of the second data transfer information, the data transfer

device reads out the second data transfer information from the second memory on the basis of the transfer start information, reads out the first data transfer information from the third memory on the basis of the transfer start information and transfers the read-out data from the first memory to the second memory on the basis of the first data transfer information and the second data transfer information, and the second processor transmits the read-out data stored in the second memory to the information processing device. (Paragraph 46).

As per independent claim 8, Matsunami et al teach,

- a channel controller for receiving a data input/output request based on file-name indication from an (Figure 1 item 5)
- information processing device (Figure 1 item 100)
- through a network and transmitting/ receiving data to/ from the information processing device; (Figure 1 item 8)
- a disk controller for carrying out input/output control of data stored in a storage volume for storing the data; (Figure 1 item 20)
- and a first memory for storing the data delivered between the channel controller and the disk controller, (Paragraph 42)
- the channel controller being equipped with a first processor for outputting a block-basis I/O request corresponding to the data input/output request and controlling the first memory, (Paragraph 35).

*The Examiner notes that the clients shown as item 100 in Figure 1 are connected "through a block I/O interface." Accordingly any data*

*requests sent and subsequently received would be received as a block-basis response.*

- o a file access processor which has a second processor and a second memory controlled by the second processor and serves to control the transmission/reception of the data input/output request and the data which is carried out with the information processing device, a data transfer device for controlling data transfer between the first memory and the second memory, and a third memory controlled by the first processor, (Paragraph 45)
- o which are formed on a circuit board, *The Examiner notes that as file servers are being taught by Matsunami et al, it is inherent that the individual server components are built on a circuit board to meet the requirements as specified in Paragraph 45.*
- o characterized in that the second processor transmits information indicating the storage position of the data in the second memory to the first processor, the first processor writes into the third memory data transfer information containing information indicating the storage position of the data in the first memory and information indicating the storage position of the data in the second memory, (Paragraph 45) *The Examiner notes that the file server contains a data transfer controller which transfers data between the file server and the requesting client. In order for the data transfer controller to begin the transfer of data, an*

*address of where the data that is being requested is passed from the file server to the requesting machine to request based on location.*

- and the data transfer device reads out the data transfer information from the third memory and controls the data transfer between the first memory and the second memory on the basis of the data transfer information thus read out. (Paragraph 46).

As per independent claim 9, Matsunami et al teach,

- a channel -controller for receiving a data input/output request based on file-name indication from an (Figure 1 item 5)
- information processing device (Figure 1 item 100)
- through a network and transmitting/receiving data to/from the information processing device; (Figure 1 item 8)
- a disk controller for carrying out input /output control of data stored in a storage volume for storing the data; (Figure 1 item 20)
- and a first memory for storing the data delivered between the channel controller and the disk controller, (Paragraph 42)
- the channel controller being equipped with a first processor for outputting a block-basis I/O request corresponding to the data input/output request and controlling the first memory, (Paragraph 35).

*The Examiner notes that the clients shown as item 100 in Figure 1 are connected "through a block I/O interface." Accordingly any data requests sent and subsequently received would be received as a block-basis response.*

- a file access processor which has a second processor and a second memory controlled by the second processor and serves to control the transmission/reception of the data input/output request and the data which is carried out with the information processing device, a data transfer device for controlling data transfer between the first memory and the second memory, and a third memory controlled by the first processor, (Paragraph 45)
- which are formed on a circuit board, *The Examiner notes that as file servers are being taught by Matsunami et al, it is inherent that the individual server components are built on a circuit board to meet the requirements as specified in Paragraph 45.*
- characterized in that the second processor transmits information indicating the storage position of the data in the second memory to the first processor, the first processor writes into the third memory data transfer information containing information indicating the storage position of the a data in the first memory and information indicating the storage position of the data in the second memory and transmits the storage position of the data transfer information in the third memory to the data transfer device, (Paragraph 45) *The Examiner notes that the file server contains a data transfer controller which transfers data between the file server and the requesting client. In order for the data transfer controller to begin the transfer of data, an address of where*

*the data that is being requested is passed from the file server to the requesting machine to request based on location.*

- and the data transfer device reads out the data transfer information from the third memory and controls the data transfer between the first memory and the second memory on the basis of the data transfer information thus read out (Paragraph 46).

As per independent claim 10, Matsunami et al teach,

- a channel controller for receiving a data input/output request based on file-name indication from an (Figure 1 item 5)
- information processing device (Figure 1 item 100)
- through a network and transmitting/receiving data to/from the information processing device; (Figure 1 item 8)
- a disk controller for carrying out input/output control of data stored in a storage volume for storing the data; (Figure 1 item 20)
- and a first memory for storing the data delivered between the channel controller and the disk controller, (Paragraph 42)
- the channel controller being equipped with a first processor for outputting a block-basis I/O request corresponding to the data input/output request and controlling the first memory, (Paragraph 35).

*The Examiner notes that the clients shown as item 100 in Figure 1 are connected "through a block I/O interface." Accordingly any data requests sent and subsequently received would be received as a block-basis response.*

- a file access processor which has a second processor and a second memory controlled by the second processor and serves to control the transmission/reception of the data input/output request and the data which is carried out with the information processing device, a data transfer device for controlling data transfer between the first memory and the second memory, and a third memory controlled by the first processor, (Paragraph 45)
- which are formed on a circuit board, *The Examiner notes that as file servers are being taught by Matsunami et al, it is inherent that the individual server components are built on a circuit board to meet the requirements as specified in Paragraph 45.*
- characterized in that the first processor writes into the third memory first data transfer information containing information indicating the storage position of the data in the first memory, the second processor writes into the second memory second data transfer information containing information indicating the storage position of the data in the second memory, (Paragraph 45) *The Examiner notes that the file server contains a data transfer controller which transfers data between the file server and the requesting client. In order for the data transfer controller to begin the transfer of data, an address of where the data that is being requested is passed from the file server to the requesting machine to request based on location.*

- and the data transfer device reads out the second data transfer information from the second memory, reads out the first data transfer information from the third memory, and controls the data transfer between the first memory and the second memory on the basis of the first data transfer information and the second data transfer information. (Paragraph 46).

As per independent claim 11, Matsunami et al teach,

- a channel controller for receiving a data input/output request based on file-name indication from an (Figure 1 item 5)
- information processing device (Figure 1 item 100)
- through a network and transmitting/receiving data to/from the information processing device; (Figure 1 item 8)
- a disk controller for carrying out input/output control of data stored in a storage volume for storing the data; (Figure 1 item 20)
- and a first memory for storing the data delivered between the channel controller and the disk controller, (Paragraph 42)
- the channel controller being equipped with a first processor for outputting a block-basis I/O request corresponding to the data input/output request and controlling the first memory, (Paragraph 35).

*The Examiner notes that the clients shown as item 100 in Figure 1 are connected "through a block I/O interface." Accordingly any data requests sent and subsequently received would be received as a block-basis response.*



- a file access processor which has a second processor and a second memory controlled by the second processor and serves to control the transmission/reception of the data input/output request and the data which is carried out with the information processing device, a data transfer device for controlling data transfer between the first memory and the second memory, and a third memory controlled by the first processor, (Paragraph 45)
- which are formed on a circuit board, *The Examiner notes that as file servers are being taught by Matsunami et al, it is inherent that the individual server components are built on a circuit board to meet the requirements as specified in Paragraph 45.*
- characterized in that the first processor writes into the third memory first data transfer information containing information indicating the storage position of the data in the first memory, the second processor writes into the second memory second data transfer information containing information indicating the storage position of the data in the second memory, the second processor transmits information indicating the storage position of the second data transfer information to the first processor, the first processor transmits to the data transfer device transfer start information containing information indicating the storage position of the first data transfer information and information indicating the storage position of the second data transfer information, (Paragraph 45) *The Examiner notes that the file server contains a data*

*transfer controller which transfers data between the file server and the requesting client. In order for the data transfer controller to begin the transfer of data, an address of where the data that is being requested is passed from the file server to the requesting machine to request based on location.*

- and the data transfer device reads out the second data transfer information from the second memory on the basis of the transfer start information, reads out the first data transfer from the third memory on the basis of the transfer start information, and controls the data transfer between the first memory and the second memory on the basis of the first data transfer information and the second data transfer information.

(Paragraph 46).

As per dependent claim 12, Matsunami et al teach, wherein the data transfer device writes into the third memory information indicating the result of the data transfer carried out between the first memory and the second memory (Paragraph 74). *The Examiner notes that the processor, 51, as taught by Matsunami et al is located within the disk management unit. In order for this processor to receive recognition of completed transfers or queries, information from the individual disk array controllers is written into the disk management unit on individual specific queries or transfers. Accordingly, the processor is able to determine the result of the data transfer carried out between the first memory and the second memory.*

As per independent claim 13, Matsunami et al teach,

- a channel controller for receiving a data writing request based on a file-name indication and writing data from an (Figure 1 item 5)
- information processing device (Figure 1 item 100)
- through a network; (Figure 1 item 8)
- a disk controller for writing the writing data into a storage volume in which data are stored; (Figure 1 item 20)
- and a first memory for storing the writing data transmitted/received between the channel controller and the disk controller, (Paragraph 42)
- the channel controller being equipped with a first processor for outputting a block-basis write request corresponding to the data writing request and controlling the first memory, (Paragraph 35). *The Examiner notes that the clients shown as item 100 in Figure 1 are connected "through a block I/O interface." Accordingly any data requests sent and subsequently received would be received as a block-basis response.*
- a file access processor which has a second processor and a second memory controlled by the second processor and serves to receive the data writing request and the writing data from the information processing device, a data transfer device for controlling the data transfer between the first memory and the second memory, and a third memory controlled by the first processor, (Paragraph 45)
- which are formed on a circuit board, *The Examiner notes that as file servers are being taught by Matsunami et al, it is inherent that the*

*individual server components are built on a circuit board to meet the requirements as specified in Paragraph 45.*

- characterized in that the first processor writes into the third memory first data transfer information containing information indicating the storage position of the writing data in the first memory, the second processor writes into the second memory second data transfer information containing information indicating the storage position of the writing data in the second memory and transmits information indicating the storage position of the second data transfer information to the first processor, the first processor transmits the data transfer device transfer start information containing information indicating the storage position of the first data transfer information and information indicating the storage position of the second data transfer information,  
*(Paragraph 45) The Examiner notes that the file server contains a data transfer controller which transfers data between the file server and the requesting client. In order for the data transfer controller to begin the transfer of data, an address of where the data that is being requested is passed from the file server to the requesting machine to request based on location.*
- the data transfer device reads out the second data transfer information from the second memory on the basis of the transfer start information, reads out the first data transfer information from the third memory on the basis of the transfer start information and transfers the writing data

from the second memory to the first memory on the basis of the first data transfer information and the second data transfer information ,  
(Paragraph 45) *The Examiner notes that the file server contains a data transfer controller which transfers data between the file server and the requesting client. In order for the data transfer controller to begin the transfer of data, an address of where the data that is being requested is passed from the file server to the requesting machine to request based on location.*

- and the disk controller writes into the storage volume the writing data stored in the first memory on the basis of the write request. (Paragraph 46).

As per independent claim 14, Matsunami et al teach,

- a channel controller for receiving a data read-out request based on a file-name indication from an (Figure 1 item 5)
- information processing device (Figure 1 item 100)
- through a network and transmitting to the information processing device read-out data read out from a storage volume for storing data; (Figure 1 item 8)
- a disk controller for reading out the read-out data from the storage volume; (Figure 1 item 20)
- and a first memory for storing the read-out data transmitted/received between the channel controller and the disk controller, (Paragraph 42)

- the channel controller being equipped with a first processor for outputting a block-basis read request corresponding to the data read-out request and controlling the first memory, (Paragraph 35). *The Examiner notes that the clients shown as item 100 in Figure 1 are connected "through a block I/O interface." Accordingly any data requests sent and subsequently received would be received as a block-basis response.*
- a file access processor which has a second processor and a second memory for controlling the second processor and receives the data read-out request from the information processing device, a data transfer device for controlling the data transfer between the first memory and the second memory, and a third memory controlled by the first memory, (Paragraph 45)
- which are formed on a circuit board, *The Examiner notes that as file servers are being taught by Matsunami et al, it is inherent that the individual server components are built on a circuit board to meet the requirements as specified in Paragraph 45.*
- characterized in that the disk controller writes into the first memory the read-out data read out from the storage volume on the basis of the read request, the first processor writes into the third memory first data transfer information containing information indicating the storage position of the read-out data in the first memory, the second processor writes into the second memory second data transfer information

containing information indicating the storage position of the read-out data in the second memory and transmits information indicating the storage position of the second data transfer information to the first processor, the first processor transmits to the data transfer device transfer start information containing information indicating the storage position of the first data transfer information and information indicating the storage position of the second data transfer information,

(Paragraph 45) *The Examiner notes that the file server contains a data transfer controller which transfers data between the file server and the requesting client. In order for the data transfer controller to begin the transfer of data, an address of where the data that is being requested is passed from the file server to the requesting machine to request based on location.*

- the data transfer device reads out the second data transfer information from the second memory on the basis of the transfer start information, reads out the first data transfer information from the third memory on the basis of the transfer start information (Paragraph 46).
- and transfers the read-out data from the first memory to the second memory on the basis of the first data transfer information and the second data transfer information, and the second processor transmits the read-out data stored in the second memory to the information processing device. (Paragraph 46).

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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew Bradley whose telephone number is (571) 272-8575. The examiner can normally be reached on 6:30-3:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald A. Sparks can be reached on (571) 272-4201. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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CPC/mb

  
**CHRISTIAN CHACE  
PRIMARY EXAMINER**